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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,225	09/24/2003	Amit Kumar	UNF.P.9336	2162

23575 7590 08/04/2005

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EXAMINER

HOPKINS, ROBERT A

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 08/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/669,225	KUMAR ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Robert A. Hopkins	1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19, 22 and 23 is/are rejected.
- 7) ☒ Claim(s) 20 and 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3-22-04, 3-26-04</u> | 6) <input type="checkbox"/> Other: ____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

Claims 22 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 22 recites "wherein the step of heat treating". There is a lack of antecedent basis in previous claim limitations for "the step of heat treating". Correction is requested.

Claim 23 recites "wherein the step of heat treating". There is a lack of antecedent basis in previous claim limitations for "the step of heat treating". Correction is requested.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-18 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Rogers et al(5290522).

Rogers et al teaches a device for treatment of exhaust gases comprising a housing(11), a fragile structure(20) resiliently mounted within the housing, and a non-intumescent mounting mat(30) disposed in a gap between the housing and the fragile

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structure, wherein the mounting mat includes melt formed, leached glass fibers containing at least 67 percent by weight silica (note REFRASIL used in Comparative Example I; column 8 lines 54-59) and exerts a minimum holding pressure for holding the fragile structure within the housing of at least about 10kPa after 1000 cycles of testing at a hot face temperature of about 900 degrees C, a gap bulk density of from about 0.3 to about 0.5 g/cm<sup>3</sup>, and a percent gas expansion of about 5 percent. Rogers et al further teaches wherein the housing has an inlet at one end and an outlet at an opposite end through which exhaust gases flow, and wherein the fragile structure has an outer surface, an inlet end surface at one end in communication with the inlet of the housing and an outlet end surface at an opposite end in communication with the outlet end of the housing. Rogers et al further teaches wherein the mounting mat comprises at least one integral, substantially non-expanding ply comprising melt-drawn leached glass fibers containing silica. Rogers et al further teaches wherein the leached glass fibers (REFRASIL) contain at least 90 percent by weight silica (as noted in the current specification on page 13). Rogers et al further teaches wherein the leached glass fibers contain from about 93 to about 95 percent by weight silica and from about 4 to about 6 percent by weight alumina. Rogers et al further teaches wherein the leached glass fibers contain less than about 1 percent by weight alkali or alkaline earth metals. Rogers et al further teaches wherein the mounting mat comprises at least 80 percent by weight of the leached glass fibers. Rogers et al further teaches wherein the mounting mat is substantially free of binder. Rogers et al further teaches wherein the leached glass fibers have a diameter greater than 5 microns. Rogers et al further teaches

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wherein the leached glass fibers are substantially shot free. Rogers et al further teaches wherein the mounting mat contains greater than 0 to about 50 weight percent of S2 glass fibers or refractory ceramic fibers. Rogers et al further teaches wherein the device is a catalytic converter.

Examiner notes that although the Rogers et al states in Table 2 that Comparative Example I failed a test, the structural limitations are clearly taught by Rogers et al, and a reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), *cert. denied*, 493 U.S. 975 (1989). Examiner notes that the "minimum holding pressure" as recited in claim 1 is not a structural limitation and hence is not given patentable weight for apparatus claims.

Claim 19 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Rogers et al(5290522).

Rogers et al teaches a method of making a device for treating exhaust gases comprising providing a mounting mat(30) comprising melt formed glass fibers containing silica, wherein the melt formed glass fibers are formed by treating the melt formed glass fibers whereby the treated glass fibers have a silica content greater than the silica content of the glass fibers prior to being treated and whereby the treated glass fibers contain at least 67 percent by weight silica(REFRASIL), wrapping the mounting mat around a fragile structure(20) adapted for treating exhaust gases, and disposing the fragile structure and mounting mat within a housing(11), whereby the mounting mat

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holds the fragile structure resiliently within the housing, and exerts a minimum holding pressure for holding the fragile structure within the housing of at least about 10kPa after 1000 cycles of testing at a hot face temperature of about 900 degrees C, a gap bulk density of from about 0.3 to about 0.5 g/cm<sup>3</sup>, and a percent gas expansion of about 5 percent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3,8-14,15-18 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by TenEyck(6855298).

TenEyck teaches a device for treatment of exhaust gases comprising a housing(12), a fragile structure(18) resiliently mounted within the housing, and a non-intumescent mounting mat(20) disposed in a gap between the housing and the fragile structure, wherein the mounting mat includes melt formed, leached glass fibers(column 5 lines 37-38) containing at least 67 percent by weight silica(note column 5 lines 1-3) and exerts a minimum holding pressure for holding the fragile structure within the housing of at least about 50kPa after 1000 cycles of testing at a hot face temperature of about 300 degrees C, a gap bulk density of from about 0.3 to about 0.5 g/cm<sup>3</sup>, and a percent gas expansion of about 5 percent. TenEyck further teaches wherein the housing has an inlet at one end and an outlet at an opposite end through which exhaust gases flow, and wherein the fragile structure has an outer surface, an inlet end surface at one end in communication with the inlet of the housing and an outlet end surface at

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an opposite end in communication with the outlet end of the housing. TenEyck further teaches wherein the mounting mat comprises at least one integral, substantially non-expanding ply comprising melt-drawn leached glass fibers containing silica. TenEyck further teaches wherein the mounting mat comprises at least 80 percent by weight of the leached glass fibers. TenEyck further teaches wherein the mounting mat is substantially free of binder(note binder is optional). TenEyck further teaches wherein the leached glass fibers have a diameter greater than 5 microns(column 5 lines 39-40). TenEyck further teaches wherein the mounting mat contains greater than 0 to about 50 weight percent of S2 glass fibers or refractory ceramic fibers. TenEyck further teaches wherein the device is a catalytic converter.

Examiner notes that the "minimum holding pressure" as recited in claim 1 is not a structural limitation and hence is not given patentable weight for apparatus claims.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Claim 19 is rejected under 35 U.S.C. 102(e) as being clearly anticipated by TenEyck(6855298).

TenEyck teaches a method of making a device for treating exhaust gases comprising providing a mounting mat(20) comprising melt formed glass fibers containing

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silica, wherein the melt formed glass fibers are formed by treating the melt formed glass fibers whereby the treated glass fibers have a silica content greater than the silica content of the glass fibers prior to being treated and whereby the treated glass fibers contain at least 67 percent by weight silica(column 5 lines 1-3), wrapping the mounting mat around a fragile structure(18) adapted for treating exhaust gases, and disposing the fragile structure and mounting mat within a housing(12), whereby the mounting mat holds the fragile structure resiliently within the housing, and exerts a minimum holding pressure for holding the fragile structure within the housing of at least about 50kPa after 1000 cycles of testing at a hot face temperature of about 300 degrees C, a gap bulk density of from about 0.3 to about 0.5 g/cm<sup>3</sup>, and a percent gas expansion of about 5 percent.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.



***Allowable Subject Matter***

Claims 20 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 20 recites "wherein the step of treating the melt drawn glass fibers includes leaching the glass fibers in an acid solution". Rogers et al and TenEyck teaches leaching the glass fibers, but does not teach a step of leaching the glass fibers in an acid solution. It would not have been obvious to someone of ordinary skill in the art at the time of the invention to provide a step of leaching the glass fibers in an acid solution because neither Rogers et al nor TenEyck suggest such a modification.

Claim 21 recites "further including the step of heat treating the mounting mat prior to wrapping the fragile structure". Rogers et al and TenEyck does not teach a step of heat treating the mounting mat prior to wrapping the fragile structure. It would not have been obvious to someone of ordinary skill in the art at the time of the invention to provide a step of heat treating the mounting mat prior to wrapping the fragile structure because neither Rogers et al nor TenEyck suggest such a modification.

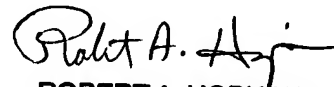
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert A. Hopkins whose telephone number is 571-272-1159. The examiner can normally be reached on Monday-Friday, 7am-4pm, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rah  
August 3, 2005

  
ROBERT A. HOPKINS  
PRIMARY EXAMINER  
*A.U. 1724*